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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/040,825 03/18/98 FRYBERG

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EXAMINER

IM62/0114

OSTRAGER CHONG FLAHERTY & ONOFRIO
300 PARK AVENUE
NEW YORK NY 10022

YAMNITZKY, M	
ART UNIT	PAPER NUMBER

1774

8

DATE MAILED:

01/14/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

MR4
01/14/00

Office Action Summary

Application No.
09/040,825

Applicant(s)
Mario FRYBERG et al.

Examiner
M. Yamnitzky

Group Art Unit
1774



☒ Responsive to communication(s) filed on Nov 9, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three (3) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-11 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-11 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1774

1. This Office action is in response to applicants' amendment received 11/09/99 (Paper No. 7) in which claims 1-10 were amended.

Claims 1-11 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Applicants' use of brackets to indicate deletions in claim 1 is confusing and likely to lead to a printing error should the present application eventually mature as a patent because claim 1 includes brackets that are properly part of the claimed subject matter. In particular, the general structure of the copolymer could inadvertently be deleted. If applicants continue to prosecute the present application, claim 1 should be cancelled in favor of a new claim to avoid this error. Appropriate changes should then be made to the dependency of claims currently dependent from claim 1.

3. The rejection of claims 1-11 under 35 U.S.C. 112, second paragraph, as set forth in Paper No. 6, is overcome in part by applicants' amendment. Remaining issues, and new issues raised by applicants' amendment, are set forth below.

Art Unit: 1774

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The “improved light fastness” limitation renders the claims indefinite because it is not clear what the comparison point is for determining whether a recording sheet comprising a coating layer containing at least one copolymer of the general structure has improved light fastness. It is not certain if any recording sheet comprising such a coating layer would inherently have improved light fastness. If not, what is the basis for determining that a particular recording sheet meets this limitation?

Proper antecedent basis is lacking for “the polymer” as recited in claim 5. (Claim 1 uses the term “copolymer” instead of “polymer”.)

Antecedent basis for the average molecular weight range of “20,000 to 150,000” is not found in the specification as this range is not set forth in the specification. (The range could be added to the specification without introducing new matter since the range “20 000 to 150 000” was set forth in original claim 5.) Further, the average molecular weight limitation renders claim 5 indefinite because it is not specified how the average molecular weight is determined (e.g. is the molecular weight a number average molecular weight or a weight average molecular weight?).

Art Unit: 1774

5. Claims 1, 4, 8 and 11 stand rejected under 35 U.S.C. 102(b) as being anticipated by Smigo et al. (5,281,307) for the reasons of record in Paper No. 6 and for the further reasons set forth below.

Claim 1 has been amended to require "improved light fastness". Since Smigo's coated paper meets the structural and compositional limitations of the rejected claims, Smigo's coated paper is considered to inherently have "improved light fastness".

6. Claims 2, 3, 6 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Smigo et al. (5,281,307) for the reasons of record in Paper No. 6 and for the further reasons set forth below.

Claim 1, from which claims 2, 3, 6 and 7 directly or ultimately depend, has been amended to require "improved light fastness". Since Smigo's coated paper meets the structural and compositional limitations of claim 1, Smigo's coated paper is considered to inherently have "improved light fastness".

7. Claim 5 stands rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smigo et al. (5,281,307) in view of Oliver et al. (5,270,103) for the reasons of record in Paper No. 6 and for the further reasons set forth below.

Art Unit: 1774

Claim 1, from which claim 5 depends, has been amended to require "improved light fastness". Since Smigo's coated paper meets the structural and compositional limitations of claim 1, Smigo's coated paper is considered to inherently have "improved light fastness".

8. Claims 9 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Smigo et al. (5,281,307) further in view of Kobayashi et al. (5,910,359) for the reasons of record in Paper No. 6 and for the further reasons set forth below.

Claim 1, from which claims 9 and 10 ultimately depend, has been amended to require "improved light fastness". Since Smigo's coated paper meets the structural and compositional limitations of claim 1, Smigo's coated paper is considered to inherently have "improved light fastness".

9. Claims 1-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (4,801,497) or Kashiwazaki et al. (5,747,146), either taken in view of Smigo et al. (5,281,307) for the reasons of record in Paper No. 6 and for the further reasons set forth below.

Claim 1 has been amended to require "improved light fastness". The Smigo patent discloses a copolymer within the scope of the copolymer set forth in present claim 1 and, according to applicants' arguments, it is the copolymer that provides the recording sheet with improved light fastness. Therefore, it is the examiner's position that the recording media of Kono

Art Unit: 1774

et al. or Kashiwazaki et al., as modified to include the copolymer disclosed in the Smigo patent, would inherently have “improved light fastness” absent objective evidence to the contrary.

10. Applicants’ arguments filed 11/09/99 have been fully considered but they are not persuasive.

With respect to the 102(b) rejection based on Smigo et al., applicants argue that the present invention provides receiving sheets for ink jet printing comprising at least one binder, a crosslinking agent and a copolymer of vinyl alcohol and vinylamine. The examiner notes that none of the claims rejected under 102(b) require a binder, and claim 1 does not require a crosslinking agent. As pointed out in the rejection, Smigo et al. disclose a paper coated with a polyvinyl alcohol/vinyl amine copolymer and teach that the copolymer may be crosslinked using a crosslinking agent.

With respect to the 102(b) rejection based on Smigo et al., applicants also argue that the claims, as amended, require the recording sheet to have “improved light fastness” but Smigo et al. do not teach that light fastness would be improved by the addition of the copolymer. Where the claimed and prior art products are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established (emphasis added). *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). When the structure recited in a reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. As stated previously in this Office action, the “improved light fastness”

Art Unit: 1774

limitation is considered to be inherently met by Smigo et al. since Smigo's coated paper meets the structural and compositional limitations of the rejected claims.

Applicants refer to ¶ 5 of the previous Office action as a rejection of claims 1-11 under 103(a) based on Smigo et al. ¶ 5 is a rejection of claims 2, 3, 6 and 7 under 35 U.S.C. 103(a) based on Smigo et al. as applied to claims 1, 4, 8 and 11 under 35 U.S.C. 102(b). Applicants argue that Smigo et al. disclose paper coated with the copolymer added in a "dry end" addition which is "done during (at the end) of paper manufacturing." Applicants argue that, in contrast, the presently claimed invention is used with RC-papers or sheets made from synthetic materials, and the coatings are applied in a separate step to the supports. This argument is not persuasive because the present claims place no limitation on the structure or composition of the "support". As taught at page 11, lines 14-15 of the present specification: "Also used as supports are plain paper, comprising all different types of papers varying widely in their composition and in their type of sizing." Further with respect to the method of making the coated support (the present claims being directed to the coated support and not the method of making the coated support), the prior art sample preparation described at column 6, lines 36-60 describes submerging a piece of paper in a solution containing the polymer. The examiner also notes the description of dry-end addition at c. 1, l. 26-28 and 55-62 of the Smigo patent. Dry-end addition is addition to the paper "after formation" and may be accomplished by various methods including spray application. As taught at page 12, lines 22-25 of the present specification: "The coating solutions or coating dispersions can be coated onto a support by any number of suitable procedures. Usual coating

Art Unit: 1774

methods include immersion or dip coating...or spraying.” It is not clear to the examiner how a coated support made according to the methods disclosed in the present specification is patentably distinct from a coated support made as described at c. 1, l. 55-62 or c. 6, l. 36-60 of the Smigo patent.

With respect to the rejection of claim 5, applicants argue that the 102(b) rejection combining the Smigo and Oliver patents is improper. A 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to explain the meaning of a term used in the primary reference or to show that a characteristic not disclosed in the primary reference is inherent. For example, see *In re Baxter Travenol Labs.*, 952 F.2d 388, 21 USPQ2d 1281 (Fed. Cir. 1991) and *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

With respect to the rejection of claims 9 and 10, applicants argue that none of the examples of water-soluble resins in the Kobayashi patent “include ‘cationically modified polyvinyl alcohol or gelatin’ as used in the present invention.” Further, applicants argue that the cited art does not suggest the desirability of modifying the coated paper of Smigo et al. to include Kobayashi’s teaching of crosslinking agent “[s]ince the crosslinking agents disclosed in Kobayashi do not teach crosslinking layers where only a small part of the layer consists of the copolymer of poly(vinylalcohol/vinyl amine).” The examiner notes that the present claims do not require gelatin. Claim 6 allows for, but does not require, gelatin; claims 1-5 and 7-11 do not mention “gelatin”. The examiner also notes that the present claims place no positive limitation on the

Art Unit: 1774

amount of copolymer of poly(vinylalcohol/vinyl amine) in the layer. In claims 1, 5 and 10, the copolymer could be the only component of the layer, and claims requiring binder or crosslinking agent do not limit the relative amounts of copolymer and binder, or relative amounts of copolymer and crosslinking agent. The cited art does suggest modifying the coated paper of Smigo et al. to include the crosslinking agents disclosed by Kobayashi et al. because the Smigo patent teaches that crosslinking agents used for poly(vinyl alcohol) may be used, and the crosslinking agents disclosed in the Kobayashi patent are used for poly(vinyl alcohol).

With respect to the rejection of claims 1-11 as unpatentable over Kono et al. or Kashiwazaki et al., either in view of Smigo et al., applicants argue that at least two thirds of the layer of Kono et al. consists of the cationically modified polyvinyl alcohol whereas the amount of copolymer in the coating layer of the present invention is much less while providing improved light fastness. This argument is not persuasive because, as previously noted, the present claims do not limit the amount of copolymer in the layer. With respect to applicants' comment that the examiner acknowledges that the Kono patent does not use the copolymer required by the present claims, the examiner disagrees. The examiner acknowledges only that the Kono patent does not explicitly disclosed the copolymer required by the present claims. As noted in Paper No. 6, the copolymer required by the present claims is clearly within the scope of the patent's cationically modified polyvinyl alcohol.

Applicants argue that the Kashiwazaki patent does not mention increased light fastness with use of the cationically modified polyvinyl alcohol. Applicants also argue that the

Art Unit: 1774

Kashiwazaki patent uses a supplementary binder in an amount of 0.1 to 30 % by weight based on the content of cationically modified polyvinyl alcohol, and teaches problems if the content (of supplementary binder) exceeds 50% by weight. Again, arguments regarding different relative amounts of components of the layer are not persuasive because there is no limit on the relative amount of copolymer in the layer of the present claims. With respect to increased light fastness, although Kashiwazaki does not mention this property, sufficient motivation exists to combine the teachings of the primary and secondary references as set forth in Paper No. 6, and increased light fastness would be an inherent result of the combination.

11. Miscellaneous: In claim 5, "a" should be --A--.

12. EP 0445327 A1, listed on the PTO-1449 filed 06/10/99 and previously not considered by the examiner for the reasons set forth in Paper No. 6, is now made of record on a PTO-892.

Applicants have identified page and line numbers in the present specification where this foreign language document is disclosed.

13. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1774

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner can generally be reached at this number from 6:45 a.m. to 3:15 p.m. Monday-Friday.

The current fax numbers for Art Unit 1774 are (703) 305-3599 for official after final faxes and (703) 305-5408 for all other official faxes. (Unofficial faxes for Art Unit 1774 can be sent to (703) 305-5436.)

MRY
01/14/00



MARIE YAMNITZKY
PRIMARY EXAMINER

1774